

Patent Claims

1. Relative pressure sensor, or pressure-difference sensor, comprising:

A measuring apparatus (1) having a first half-chamber (4) with a first volume, which is sealed by a first separating membrane (2) having a first membrane stiffness, and a second half-chamber (5) with a second volume, which is sealed by a second separating membrane (3) having a second membrane stiffness, wherein the first half-chamber (4) is separated from the second half-chamber (5) by a measuring membrane (7), and the first half-chamber (4) is filled with a first transfer liquid having a first coefficient of thermal expansion and the second half-chamber (5) is filled with a second transfer liquid having a second coefficient of thermal expansion, characterized in that a first product of the first membrane stiffness, the first volume and the first coefficient of thermal expansion is essentially equal to a second product of the second membrane stiffness, the second volume and the second coefficient of thermal expansion, wherein at least one factor of the first product deviates, by design, from the corresponding factor of the second product.

2. Pressure sensor as claimed in claim 1, wherein the first membrane stiffness deviates from the second membrane stiffness.

3. Pressure sensor as claimed in claim 1 or 2, wherein the first volume deviates from the second volume.

4. Pressure sensor as claimed in one of the claims 1 to 3, wherein the first coefficient of thermal expansion deviates from the second coefficient of thermal expansion.

5. Pressure sensor as claimed in one of the claims 2 to 3, wherein the first coefficient of thermal expansion is equal to the second coefficient of thermal expansion.

6. Pressure sensor as claimed in one of the claims 1 to 4, further comprising at least one mechanism for fine tuning volume in a half-cell.

7. Pressure sensor as claimed in claim 5, wherein mechanisms are provided for fine tuning volume in each of the two half-cells.